

App. No.: 10/809,761
 Amdt. dated December 9, 2005
 Reply to Office Action mailed September 12, 2005

Docket No.: 31175413-004002
 (PATENT)

Amendments to the Claims

This listing of the claims will replace all prior versions and listings. Claims 1-10, 16, 18 and 21 have been canceled. Claims 26-28 have been withdrawn. Claims 11-15, 17, 19, 20, and 22-25 are currently pending in this application.

Listing of Claims:

Claims 1-10 (canceled).

Claim 11 (currently amended): A method of inhibiting bacterial infection, said method comprising:

- a) identifying the presence of a bacteria in a mammal; and
- b) administering to said mammal a protein comprising a sequence selected from the group consisting of: i) SEQ ID NO: ~~1-5, 7-10, and 12-24~~ 8; and ii) a sequence which has 95% identity to ~~a sequence in i)~~ SEQ ID NO: 8; in an amount effective to kill said bacteria.

Claim 12 (previously presented): The method of claim 11, wherein the protein is delivered by a method selected from the group consisting of bacteriophage, an expression vector, or direct administration of protein.

Claim 13 (currently amended): The method of claim 11, wherein the protein comprises a combination of proteins including SEQ ID NO: 8 and proteins having sequences selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; SEQ ID NO: 5; SEQ ID NO: 7; SEQ ID NO: 9; SEQ ID NO: 10; SEQ ID NO: 12; SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; SEQ ID NO: 21; SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 2 and 3; SEQ ID NO: 3 and 4; SEQ ID NO: 2, 3, and 4; SEQ ID NO: 1, 2, 3, and 4; SEQ ID NO: 9 and 10; SEQ ID NO: 14 and 15; ~~SEQ ID NO: 8 and 14; SEQ ID NO: 8 and 15; SEQ ID NO: 8, 14, and 15;~~ SEQ ID NO: 16, 17, and 18; SEQ ID NO: 17 and 18; SEQ ID NO: 16, 17, 18, and 19; SEQ ID NO: 17, 18, and 19; and SEQ ID NO: 20, 21, and 22.

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Claim 14 (original): The method of claim 13, wherein the combination of proteins have the sequences of SEQ ID NO: 8, 14, and 15.

Claim 15 (original): The method of claim 11, wherein the protein is fused to a cationic agent, a hydrophobic agent, a signal sequence, a lipid or combinations thereof, and is delivered by a method selected from: inhalation of an aerosolized anti-bacterial peptide; topical application; injection; and oral ingestion.

Claim 16 (canceled).

Claim 17 (currently amended): A method of inhibiting bacterial infection, said method comprising:

- a) generating a bacteriophage vector, said vector comprising an expression construct operably linked to a recombinant bactericidal SPO1 gene encoding SEQ ID NO: 8 or a sequence with 95% identity to SEQ ID NO: 8;
- b) identifying the presence of a bacteria in a mammal; and
- c) administering the bacteriophage of a) to the mammal of b).

Claim 18 (canceled).

Claim 19 (currently amended): A method of inhibiting bacterial infection, said method comprising:

- a) identifying the presence of a bacteria in a mammal; and
- b) administering to said mammal a pharmaceutical comprising a composition selected from the group consisting of a bactericidal SPO1 protein comprising SEQ ID NO: 8 and a combination of bactericidal SPO1 proteins including a protein comprising SEQ ID NO: 8.

Claim 20 (currently amended): The method of claim 19, wherein said combination of bactericidal SPO1 proteins comprises a one or more sequences selected from the group consisting of: i) SEQ ID NO: 1-5, 7[[-]], 9, 10, and 12-24; and ii) a sequence which has 95% identity to a sequence in i).

Claim 21 (canceled).

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Claim 22 (previously presented): A method of inhibiting bacterial infection, said method comprising:

- a) identifying the presence of a bacteria in a mammal; and
- b) administering to said mammal a pharmaceutical composition comprising a combination of bactericidal SPO1 proteins, wherein said combination comprises a protein of SEQ ID NO: 8 and one or more proteins selected from the group consisting of SEQ ID NO: 1-5, 7, 9, 10, and 12-24, in an amount effective to inhibit the growth of said bacteria.

Claim 23 (previously presented): The method of claim 22, wherein said combination comprises a protein selected from the group consisting of SEQ ID NO: 2 and 3; SEQ ID NO: 3 and 4; SEQ ID NO: 2, 3, and 4; SEQ ID NO: 1, 2, 3, and 4; SEQ ID NO: 9 and 10; SEQ ID NO: 14 and 15; ~~SEQ ID NO: 8 and 14; SEQ ID NO: 8 and 15; SEQ ID NO: 8, 14, and 15;~~ SEQ ID NO: 16, 17, and 18; SEQ ID NO: 17 and 18; SEQ ID NO: 16, 17, 18, and 19; SEQ ID NO: 17, 18, and 19; and SEQ ID NO: 20, 21, and 22.

Claim 24 (previously presented): The method of claim 22, wherein said combination comprises a protein selected from the group consisting of SEQ ID NO: 14 and SEQ ID NO: 15.

Claim 25 (previously presented): The method of claim 22, wherein said combination comprises SEQ ID NO: 14 and SEQ ID NO: 15.

Claim 26 (withdrawn): The method of claim 22, wherein said pharmaceutical composition comprises as an expression construct comprising nucleic acids encoding said proteins operably linked to one or more promoters.

Claim 27 (withdrawn): The method of claim 24, wherein said expression construct is a vector.

Claim 28 (withdrawn): The method of claim 25 wherein said vector is delivered via phage.